Mason Sansom

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Education

University of Utah Salt Lake City, UT

Bachelor of Science in Computer Science, Minor in Mathematics | GPA: 3.90 *Aug. 2021 - May 2025*

Experience

Associate Software Engineer May 2025 - Present

Best Buy *Minneapolis, MN*

- Engineered high-throughput data pipelines using Google Cloud Platform and Java to process customer interaction data, enabling faster decision-making and data-driven customer experiences.
- Migrated data architecture to composite feature storage, reducing monthly Dataflow costs by 96% (from $1,356 to $52) and improving data accessibility for ML and analytics teams.
- Migrated an existing Dataflow pipeline to a Cloud Function, reducing yearly costs from $1,300 to $4, a 99.7% reduction, while maintaining full functionality.
- Took ownership of end-to-end data flow and collaborated cross-functionally with data science and analytics teams to continuously improve pipeline reliability and scalability.

Associate Software Engineer Intern June 2024 - Aug. 2024

Best Buy *Minneapolis, MN*

- Developed and maintained large-scale ETL pipelines using BigQuery and Google Cloud Platform, supporting critical business data workflows.
- Implemented and optimized backend services with Java and Micronaut, enhancing system performance and resilience under load.

Projects

Easy Going | *Node.js, AWS EC2, PostgreSQL, Amazon RDS, S3* Jan. 2025 - May 2025

- Designed and deployed a Node.js backend on AWS EC2 with PostgreSQL on Amazon RDS and integrated AWS S3 for secure, scalable cloud infrastructure.
- Built RESTful APIs and an intelligent photo caching system, reducing redundant external API calls and improving responsiveness and cost-efficiency.

Memory Allocator | *C, Systems Programming* Sept. 2024 - Dec. 2024

- Implemented a custom dynamic memory allocator in C, including malloc, free, and realloc using an explicit free list with first-fit allocation.
- Optimized memory management with block splitting, coalescing, and 16-byte alignment, reducing fragmentation and improving allocation efficiency.

Technical Skills

Languages: Java, C++, Python, C, C#, JavaScript (Node.js, React Native)

Cloud & Tools: Google Cloud Platform (BigQuery, Dataflow, Cloud Functions), AWS (EC2, RDS, S3), Docker, Git, Linux, Firebase Auth, CI/CD

Databases: PostgreSQL, SQL schema design

Activities & Leadership

Involvement: University of Utah Marching Band, Coding Club, University E-Sports Team